UNITED NATIONS

A

United Nations Conference
on Science and Technology
for Development

Vienna, Austria, August 1979

Distr.
GENERAL

A/CONF.81/NP.71(SUM)
20 October 1978

ORIGINAL: ENGLISH

HUNGARIAN PEOPLE'S REPUBLIC

SUMMARY OF NATIONAL PAPER*

1. Hungary is a relatively small, moderately developed country in Central Europe. Her social system is socialist, her economy is based on planning, and she is a member of the Council for Mutual Economic Assistance. She has relations with both the industrially developed and the developing countries on a wide scale. Since 1955 she has been a member of the United Nations as well as of most of its specialized agencies, among them of GATT. She has diplomatic relations with 123 countries and contractual economic relations with 57 countries.

2. Research and development is carried out at 128 research institutes, 1,080 university and other higher educational departments and at 264 enterprise research units. Research and development activity is guided by plans worked out by the state and research institutes. In Hungary, there exist science policy guidelines that are approved of by the State and laid down in documents. Her scientific and technical establishment developed during the past 20 years enables the country to undertake international co-operation.

3. Intensive participation in the international division of labour is an objective necessity for Hungary from the point of view of both politics and economics as well as of economic and science policy. The country is poor in raw materials and energy resources; about one third of her gross products is exported; and she is not able to meet the requirements demanded at the given level of development in the fields of science, technical development and higher education. At the same time, there are such scientific and technical results achieved in the country, in which foreign countries might be rightly interested and which

* The designations employed, the presentation of material and the views expressed in this paper are those of the Government of Hungary and do not necessarily reflect the practices and views of the Secretariat of the United Nations in any of these respects.

might strengthen East-West co-operation that has especial topicality in our days. The aim of the country's economic policy is to accelerate the development of certain fields selected according to the potentialities of the country.

4.1 The country's agriculture is almost entirely based on socialist big farms. Science has had a great role in ensuring a 3 per cent average growth rate per annum in agricultural production in the past period, despite the fact that both the cultivated area and the number of agricultural workers have significantly decreased - due to the latter's employment in industry and encroachments upon the former by the infrastructure. This decrease has been counterbalanced partly by an increase in productivity and partly by having labour force with higher qualifications. The production systems developed in agriculture - i.e., big comprehensive production units - have made it possible to use modern production methods: viz., up-to-date technical means, chemical and biological materials and procedures. Our experiences gained in developing either planning or the infrastructure can be especially well utilized by producing enterprises both small and big. Average yields have increased two-, three-fold in the past 20 years. Especially those new agricultural technologies should be mentioned which have been successfully used in averting hail, i.e., generally speaking, in influencing the weather. Results worth mentioning have been achieved in poultry farming and the milling industry.

4.2 Energetics research is of great importance for Hungary. A great part of the coal resources is of poor quality and thus in order to be able to use them in power plants the solution of several scientific and technical problems was required. As a result of these researches there now exist such power plants which can reliably provide a significant portion of the country's electric energy needs. Also related to the power plants was the task, now already solved, of decreasing the loss of heat in these plants; the cooling towers and heat exchangers working with air-cooling, saving essential quantity of water, developed by Hungarian researchers have made these plants more economical. In co-operation with the Soviet Union, high-voltage line systems have been, and are being built. The first nuclear power plant of the country will start to operate in 1980 and according to the plans the ratio of nuclear-energy generated electricity within the total electric energy supply will be 40-50 per cent by 2000. For the peaceful utilization of nuclear energy, research is carried out in other fields as well: measuring and controlling procedures with isotopes have also spread.

4.3 The only important mineral resource of Hungary is bauxite, which is the basis of the country's aluminium industry. Reliable and economical technologies have had to be developed for processing impure bauxites. New procedures have been elaborated for increasing the capacity of the Hungarian aluminium industry, which have already been employed successfully also in Greece, India, Jamaica, Yugoslavia and Viet Nam.

4.4 Related to agriculture, an important field of basic researches belonging to natural sciences is the development of new protein sources as well as the elaboration of technologies for processing them. The first chlorophyll-based protein factory of the world has been operating in Hungary since 1972 and more such factories are being built in various regions of the world.

4.5 On the basis of the development of the public health service, of prophylaxis and medical research, endemics, which had been very dangerous earlier, have been forced back to a minimum level (tuberculosis, typhus, Heine-Medin, diphtheria, malaria, etc.). A blood-transfusion service based on voluntary blood-donors has been organized. Several new products of the Hungarian pharmaceutical industry, which has a great tradition, are spreading all over the world. After Switzerland, Hungary is second in the world in medicine production per capita. The production of medical equipment is also well developed.

4.6 Employment in Hungary has reached such a level that not only unemployment has ceased to exist but there is great labour shortage. The requirements of intensive development enforce the economical use of live labour. Hence the especially emphasized role of automation and computer technology within technical research. Several process-controlling equipments have been developed and various computers have been marketed, some of them imported, others developed in Hungary.

4.7 The process of industrialization, the relatively high population density and fast developing urbanization have given rise to the tasks of environmental protection and the related modern comprehensive researches. The central problems in this field are the protection of the water resources, the development of water management and the protection of the Hungarian countryside well known by tourists.

5. The above-mentioned problems relating to scientific research and technical development are only examples, but they represent the important results that Hungary has achieved partly by her own efforts and partly through international co-operation, primarily with the socialist countries, but not to a small extent with Western countries as well. At the same time these are the fields of science and technology in which Hungary cannot only co-operate with the developing countries but can also provide assistance. Following from the essence of our socialist system are the solidarity and the readiness with which we can participate, simultaneously with the development of our economic relations, in establishing the independent national economy and the scientific and technical basis of the developing countries, in eliminating their dependence and in further developing their progressive traditions.

6. The framework for such co-operation and assistance is provided by the given bi- and multilateral co-operation agreements on the one hand, while on the other there are great opportunities for the further development, extension and differentiation of these agreements. Assistance is carried out within the framework of a multifarious and time-tested system: such as, e.g., university and post-graduate training in Hungary, which has been resorted to so far by 60 developing countries in an order of magnitude of about 1,500 students a year. Hungary can send experts to work abroad; in 1978 almost 600 Hungarian experts are working in the developing countries. Hungary can also significantly help the developing countries by her participation in certain national developmental programmes by way of exporting technical services, carrying out economic and technical surveys, elaborating pilot-projects, evaluating various offers, providing management consulting, etc. Hungary's available intellectual capacity serves as a basis for this.

7. In this respect, it is not only the developing countries but also Hungary that require the participation of the international organizations, primarily that of the United Nations and its specialized agencies. When, similarly to the practice so far, Hungary wishes to take part in developing the scientific-technical potential of the developing countries, she is aware of the fact that she herself also needs the advantages resulting from the international division of labour. Consequently, one of the main tasks of the international organizations would be to promote the gradually increasing participation of both the developing and the developed as well as the moderately developed countries in the great international programmes, on the basis of equality and mutual advantages and of the principle of non-discrimination, i.e., in the spirit of the principles laid down in the United Nations Charter. One of the fundamental promotional factors of global development is scientific and technical co-operation which is unambiguously able to serve the relaxation of political tensions as well as world peace, the main prerequisite of progress.